Recent Developments in Cabling Technology used to Manufacture Superconducting Accelerator Magnets. * J. ROYET, AND R. SCANLAN, Lawrence Berkeley Laboratory, Berkeley, CA, 94720.—A developmental cabling machine was constructed at LBL in 1984; this machine was used to optimize the parameters for the SSC 40 mm dipole cables, SSC 50 mm dipole cables, and the Fermilab low β quadrupole cables. This machine was recently upgraded to 48-strand capability and used to make advanced cables of both NbTi and Nb_3Sn superconductors. Cables with up to 48 strands and up to 22 mm in width have been produced; these cables offer the magnet designers increased flexibility in advanced magnet designs. In addition, cables have been made with rectangular strands which may offer improved mechanical properties compared with cable made from circular wires. We summarize these developments and describe the various cables we have made, including the design parameters and an assessment of manufacturability.

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